



(c)

$$y^K = w^T \cdot z^K$$

$$y_j^K = w_j^T \cdot z^K$$



↓  $\rightarrow 10 \times 1$  matrix. and  $0 \leq K \leq 10000$ .



$$z^K(u, v) = [x(u-1, v-1), x(u, v-1), \dots, x(u+1, v+1)]^T$$

$$y_j^K(u, v) = w_j^T \cdot z^K(u, v)$$

$$= w_j^T \cdot [x(u-1, v-1), \dots, x(u+1, v+1)]^T$$

(d) each  $100 \times 100$  image gives 10,000 samples.

So there are 1000,000 samples.